

BONDING METHOD FOR MICROCHANNEL PLATES

Abstract

Mating faces of a microchannel plate (MCP) (50) and a multi-layer ceramic body (80) unit are deposited with a thin film having protuberances (84) using a suitable metal selected for optimum diffusion at a desired temperatures and pressure. The metallized MCP (50) and multi-layer ceramic body (80) unit are then aligned and placed in a bonding fixture (F) that provides the necessary force applied to the components to initiate a diffusion bond at a desired elevated temperature. The bonding fixture (F) is then placed in a vacuum heat chamber (V) to accelerate the diffusion bonding process between the MCP (50) and the multi-layer ceramic body unit (80).